U.S. Department of Energy

Data Upload Specification

With

Instructions for Uploading Project Data

Laboratory Directed Research and Development &
Plant/Site Directed Research, Development and
Demonstration Program Reporting System
(L-P-SDRD)

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Document Revision History

Version 2.5	**October 31, 2002**	New Section 3.2 / Item 7 Special characters in uploads.
Version 2.6	**July 31, 2003**	**Added two new fields in upload file:** PreFY_ProjectID – Previous Fiscal Year's Project ID. PreSystemCost – Total prior years cost that are not in L-P-SDRD system. **Modified upload specification:** Allow negative numbers for all cost related fields including personnel salary cost, equipment cost, travel cost, other cost, and Pre L-P-SDRD System Cost.
	October 31, 2003 Jackie Gao	Modified finalization requirements in Appendix A.
Version 2.7	**March 15, 2004** Jackie Gao	**Modified upload specification:** Delete the following project fields from the user interface in order to streamline the capture of L-P-SDRD project data required by the U.S. Congress. Personnel Salary Cost, Equipment Cost, Travel Cost, Other Cost, Pre L-P-SDRD System Cost, Category of work, 2nd category of work, Expected Result, Tie to Mission. Add **Total Cost** project field for project data collection.
Version 2.8	**August 8, 2005** Jackie Gao	On batch data upload page, add a check box to indicate if this year's projects need to be linked back to last year's projects by projectID. If checked, projects are automatically linked to the last year's project unless XML lastFY_projectID field has data. If not checked, same as last year, projects will only be linked by lastFY_ProjectID.

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1.0 Overview

The purpose of this document is to define the batch upload process and to provide the reader with technical information that can be used to generate and send an electronic file of projects from Department of Energy laboratory and weapons plant sites to the Department's L-P-SDRD website.

This document was designed to assist the technical person (e.g., programmer, analyst, etc.) who will be responsible for assembling a site's project data into an electronic file that uses the Extensible Markup Language (XML) file format. It is assumed that this person will have a working knowledge of the XML file format, XML file utility programs, and web browser software.

Website Information

The L-P-SDRD web application is being developed for the Office of Program Liaison and Financial Planning (ME-100) by the Office of Corporate Financial Systems (ME-13) of the U.S. Department of Energy. The L-P-SDRD website is located at the Department's Headquarters facility in Germantown, Maryland and is operated by the ME-100 organization. The website can be accessed at the following address: https://LDRDRPT.doe.gov. Questions and comments regarding technical information content or procedures should be directed to Carl.Rupani@hq.doe.gov; questions regarding business rules or procedures should be directed to Theresa.Ballinger@hq.doe.gov.

Authority

In response to a recently issued directive from the Secretary of Energy to the Department, the Office of Program Liaison and Financial Analysis (ME-100) has accepted a requirement to develop an electronic system that will produce reports on Laboratory, Plant, and Site Directed Research and Development (LDRD) Plant Directed Research, Development and Demonstration (PDRD) and Site Directed Research, Development and Demonstration (SDRD) data. Information contained in these reports will be used by DOE management and the United States Congress.

2.0 Quick Reference

This section provides a simplified set of instructions for setting up and sending the upload file.

Step	Description of Step
1	Assemble the projects to be transmitted to the L-P-SDRD website.
2	Place selected information from these projects into an XML file. See Section 3.2 of this document for a description of Technical Rules and Section 5 for XML formatting details.
3	Log into the L-P-SDRD application and then select the Upload Data hyperlink. After identifying the XML file to upload from the local workstation, select the Submit button to upload it to the L-P-SDRD system. *Note: A valid L-P-SDRD UserID and password are needed to access this system. Use the hyperlink below to connect to the website and to complete the "Request Account" access form:* https://ldrdrpt.doe.gov.
4	Once the upload process completes, a screen named "Status of Site Uploads" will appear and will display information about the number of records that were received and processed. Select the "View Error / Warning List" hyperlink to review these error messages.
5	If the application detects minor errors in your upload file, you will have the option to correct these errors (while still logged into the website) by hand-keying the correct values into each project. Errors of a more critical nature must be corrected locally (i.e., at your site by changing the contents of the XML file) and should be resubmitted via the XML file.
6	Perform a final review of each project that has been submitted to the application. Log into the L-P-SDRD application and select the "Projects" hyperlink from the main menu. Then review each project for accuracy and completeness and, if necessary, correct or enter missing data. If the project record contains all of the data that is required by the application, select the "Finalize" option to indicate that the project is ready for certification.

3.0 Processing Rules

This section describes the business and technical rules that govern the process of collection, formatting and submission of project records via the upload file.

3.1 Business Rules

1. Only Department of Energy National Laboratories and Weapons Plants may submit project data to the L-P-SDRD web application. All other users can select 'Status of Site Uploads' to view the summary and errors/warnings of the site upload information within their cognizance.

2. Lab or plant sites may upload project data as often as they choose, and they may provide only partial data with each upload.

    - If project data already exists for a particular Project ID for the processing fiscal year, then the Project data for that database record will be updated.

    - Otherwise a new record will be created. See Section 3.2 Technical Rules in this document for additional details. All other records in the database that were not updated by this process will remain unchanged.

3. Batch uploads of project data will not be permitted when a site has been "locked down" (i.e., made unavailable for update). If an authorized user tries to upload data to a locked site, an error message will be displayed on the screen that will indicate one or more of the following lock conditions:

    - Fiscal Year already published: no further changes allowed;
    - The System Administrator has locked this site;
    - The site has been locked by the Senior Site Representative;
    - This Site has been certified.

4. All data submitted to the L-P-SDRD system, using the Upload Data option, must be in the prescribed XML file format.

3.2 Technical Rules

1. Text for the XML encoding standard should be placed in the first line of the XML file to specify the desired XML encoding method, and should be entered as follows:
   <?xml version="1.0" encoding="ISO-8859-1"?>

    - Text for the XML header line and encoding method, as specified above, will permit insertion of special characters into the text of the XML file.

    - If this line is omitted from the XML file then the L-P-SDRD application will load

project data with the industry default setting of "<?xml version="1.0" encoding="UTF-16"?>".

- Information on Microsoft's implementation of XML is available at the Microsoft MSDN website address of:

  http://msdn.microsoft.com/downloads/default.asp?url=/downloads/sample.asp?url=/msdn-files/027/001/766/msdncompositedoc.xml.

- See Section 5.1 XML File Layout Table for examples and additional information.

Note: *All XML file errors cause termination of the upload process; errors are displayed on the upload page. No L-P-SDRD system error message can be generated if system is unable to read the XML file.*

2. The XML document also requires a header element of "<SiteCode_FiscalYear>" and a footer element of "</SiteCode_FiscalYear>" to be a valid XML upload document.

   - The Site Code placed in this header element must match the value of the sender's Site Code. See Appendix B for a list of Site Codes.

   - The value of the Fiscal Year placed in this header element must also match the current Fiscal Year. Otherwise, an error message will be displayed on the page.

   - See Section 5.1 XML File Layout Table for examples and additional information.

   - If these conditions are not satisfied, the data uploading process will terminate.

3. The following four data fields, called "required system fields" **must be placed in every record in every transmission** and are listed below:

   - ProjectID;
   - ProjectName;
   - TypeResearch;
   - ProjectStartDate.

   - If any of the four data fields are missing from any record in the XML file, then the application will generate an error message (i.e., called a "critical system error") and this error will be listed on the "Errors/Warnings Page". Consequently, the L-P-SDRD database will not be updated with information contained in the XML record.

   - See Section 5.1 XML File Layout Table for examples and additional information.

4. If a site submits a project with a Project ID that is identical to a Project ID that was previously submitted by another site, then this new project will be rejected. This condition will generate an upload ERROR message that will be listed on the

errors/warnings page as a critical system error. This project will not be added or updated.

5. The following fields, called “optional fields” should also be placed into each record of the file (but can be omitted if data is not available): TotalCost, ProjectDesc, InvFirstName, InvLastName, POCFirstName, POCLastName, POCPhone, ExpectedCompDate.

    - If an optional data field is not present, then the corresponding database field for that XML element will NOT be added or updated.

    - If an XML record contains valid data, then information from this field will be used to update the corresponding field in the database under these conditions:.
        1. If the XML field contains data that is too long for the receiving database field, then the truncated value will be written to the database field.
        2. If the XML field contains spaces, then spaces will be written to the database field.

6. Data contained in “optional fields” listed below will be processed and edited by the application. If an optional field contains invalid data, then the following rules will apply:

    - ProjectDesc, InvFirstName, InvLastName, POCFirstName, POCLastName, POCPhone data fields: If the text is too long, the field will be truncated to the correct length, and the truncated value will be written to the database. A warning message will be generated.

    - ExpectedCompDate data field:
        1. If the data contained in this field does not use a valid date format, then the corresponding field in the database will NOT be updated and a warning message will be generated.
        2. If the data contained in this field is “empty”, then blanks will be written to the database and a warning message will be generated.

7. Special characters in uploads
    - Some special characters in XML file need to be converted to be loaded correctly. Five are listed in XML books (Please replace them in this order):
      & to &
      < to <
      > to > (converting optional)
      ' to ' (converting optional)
      " to " (converting optional)

    - Two are created by MS-Word or MS-Excel auto formatting:

      — (long dash, em dash - also called extra long dash, en dash) need to be converted to - (a short dash) or -- (double dash)

      ‘ and ’ (Smart quotes) need to be converted to ' (single quote). Turn off smart quotes

can avoid this problem.

8. LastFY_ProjectID field is processed as follows:

   If the LastFY_ProjectID exists in last fiscal year's project record, a link is saved in the system. The system can use this link to calculate cumulative cost.

   If the record identified by LastFY_ProjectID does not exist in our database, the batch feed record will be rejected. An error message will be generated too.

   For new project, enter N/A for LastFY_projectID.

9. Fiscal Year 2004 deleted project fields will be ignored if they appear in the XML records.

10. On batch data upload page, add a check box to indicate if this year's projects need to be linked back to last year's projects by projectID. If checked, projects are automatically linked to the last year's project unless XML lastFY_projectID field has data. If not checked, same as last year, projects will only be linked by lastFY_ProjectID.

4.0 Generating and Sending the Project File

This section describes the steps that must be taken to create the project file and to send this file to the L-P-SDRD website.

4.1 Generating the Project File

If using a Microsoft Windows operating system (e.g., Windows 2000, Windows 98, etc.) then creation of a new XML file or modification to an existing XML file can be done with the aid of a word processing program such as Microsoft Notepad or Microsoft Word Pad. Alternatively, a software program can be written to generate an XML file and convert existing project data into the XML file format.

When generating the XML file, please refer to Section 3.2 Technical Rules and Section 5 of this document for information on how to format each element within the file.

Regardless of the method chosen to create the file, the file type extension of the XML file must use the Extended Markup Language designation of ".XML". The file name of the XML file can conform to local standards. Examples of valid XML files are: AMES1.XML, Sandia.xml, LBNL2002.XML.

4.2 Uploading the Project File

1. The prerequisites for uploading a Project File to the L-P-SDRD website are:

   - The project file must have already been created and stored on a medium that is available to the sending workstation's web browser (e.g., a medium such as a disk drive on the site's Local Area Network, or a hard drive on a local workstation, etc.).

- The sender (Senior Site Representative or Data Entry person) for the site must have a valid user account on the L-P-SDRD system.

2. Using web browser software, the sender for the site logs onto the L-P-SDRD website. When connected to the L-P-SDRD website, the application automatically associates this person with his or her pre-established site code, user group and operating privileges and displays the L-P-SDRD home page.

3. The sender selects the **Upload Data** hyperlink from the list of options on the page.

4. If the sender's site is locked, a message appears on this screen to inform the sender that "the site has been locked and is currently unavailable."

5. If the sender's site is not locked, then the Upload Data page appears and prompts the sender for the location (e.g., path) of the Project File. The sender identifies the XML filename and path by either entering the path name and file name of the Project File or by pressing the Browse button. Once the file has been identified and located, the sender presses the **Submit** button to begin the upload process. A confirmation box appears to verify the XML filename and path. The sender selects **OK** to continue or **CANCEL** to abort the upload.

6. At this point, the sender can either exit the L-P-SDRD application or wait several minutes for the application to process the submitted file and review the results.

7. Once the XML Project File has been received by L-P-SDRD, the application opens the file and processes each XML record, one-at-a-time. While processing a record, the application analyzes the data elements of each record and performs actions based on Section 3.2 Technical Rules.

8. When all XML records have been processed by the application, a screen named **Transmission Summary Page** appears and displays information about the number of records received, updated, etc. At this time, the user can also review the **Transmission Error Log**.

4.3 Transmission Summary Report

When the upload is completed, L-P-SDRD generates a **Transmission Summary Report** page. The sender uses this report to verify the number of records and contents of the transmission from the site. The report includes information such as the Date of the Upload, the Fiscal Year of the Upload, the Total XML Records Received, the Total L-P-SDRD Records Updated, the Total Errors, etc.

An example of the Transmission Summary Report page appears below.

Transmission Summary Report	
User Name of Sender	Julian Anderson
Total XML Records Sent in Upload File	600
Total Database Project Records Updated	425
Total Database Project Records Failed to Update	45
Total Database Project Records Added	130
Site Code of Upload File	Ames Laboratory
Fiscal Year of Upload File	2002
Filename for Upload File	AMES1.XML
Date and Time Upload File Processed	7/9/2002 1:53:00 PM
Link to Previous Fiscal Year Project by Project ID	No

4.4 Transmission Error Log

The application also provides a **Transmission Error Log** that can be used to review errors and warning messages that were identified by the application while processing XML records. The Transmission Error Log is displayed on the screen as two separate tables (shown below) and provides the following information:

- Date of the Upload, Sender's Name, Site Code and Fiscal Year of the Batch File;
- For each project with an error/warning: the Project ID or Record No, the Critical Error indicator, the Error/Warning Description, the Action, and the Extra Information related to the value of the record contained in the upload file.

Upload Date	User	Site	Fiscal Year
7/9/2002 1:53:00 PM	Data Entry	Ames Laboratory	2002

Project ID/ Record No	Critical Error	Error/Warning Description	Action	Extra Information
Record 1	Y	Error: Project Name is empty.	L-P-SDRD database not updated with this record.	
Record 1	Y	Error: Research Type not found.	L-P-SDRD database not updated with this record.	
00-152	Y	Error: Research Type not found.	L-P-SDRD database not updated with this record.	
00-154		Warning: Project Description too long.	Only first 800 characters were entered into L-P-SDRD data field.	This is a long Message…

Project ID/ Record No	Critical Error	Error/Warning Description	Action	Extra Information
00-155		Warning: Expected Completion Date has invalid date format.	L-P-SDRD database not updated with this record.	34/34/2002

Error Messages

The table below provides a complete list of error messages that can be found in the Transmission Error Log

Error Description	Action
Error: File Begin & End Elements does not match user's profile for site and/or fiscal year.	L-P-SDRD database not updated with this file for all records.
Error: Illegal character in Project ID. Please use 0-9,a-z,A-Z,-, and / only.	L-P-SDRD database not updated with this record.
Error: Project ID exists and belongs to a different site.	L-P-SDRD database not updated with this record.
Error: Project ID is empty.	L-P-SDRD database not updated with this record.
Error: Project ID too long.	L-P-SDRD database not updated with this record.
Error: Project Name is empty.	L-P-SDRD database not updated with this record.
Error: Project Start Date is missing or invalid date format.	L-P-SDRD database not updated with this record.
Error: Research Type not found.	L-P-SDRD database not updated with this record.
Error: LastFY_ProjectID does not exist.	L-P-SDRD database not updated with this record.
Warning: Expected Completion Date is missing or invalid date format.	L-P-SDRD database not updated with this field.
Warning: Investigator Name too long.	Only first 60 characters were entered into L-P-SDRD data field.
Warning: POC Name too long.	Only first 60 characters were entered into L-P-SDRD data field.
Warning: POC Phone too long.	Only first 15 characters were entered into L-P-SDRD data field.
Warning: Project Description too long.	Only first 800 characters were entered into L-P-SDRD data field.
Warning: Project Name too long.	Only first 200 characters were entered into L-P-SDRD data field.

4.5 Correcting Errors

If the upload file reveals errors, as indicated by the Transmission Error Log, then two correction methods are available:

A. Data Entry Method

Once the XML batch file has been posted to the L-P-SDRD database, the sender can correct the errors/warnings contained in database records by logging onto the L-P-SDRD application and by fixing the reported errors/warnings. To utilize this method, follow the steps below.

1. Log into the application

2. Select a Project record that contains errors/warnings (using the Project List page or Errors/Warnings page hyperlink).
3. Enter valid information for each field on the screen that contains error/warnings.
4. Save the record.
5. Repeat these steps for each record.

B. XML File Upload Method

A second method for correcting errors/warnings is to identify those records in the XML upload file that generated error messages in the **Transmission Error Log** and to fix the data elements contained in each record. When all data elements in each record have been corrected, simply re-submit (i.e., upload) the group of corrected records to the L-P-SDRD website.

5.0 Description of the Project File

This section describes the elements of the project file and provides two examples of data formatting for the XML file.

5.1 XML File Layout for Projects

The XML File Layout Table for Projects, shown below, provides a description and sequence number for each element (i.e., data field) that must be placed in each record of the XML file. The table is organized as follows:

- Column #1 – each row from this column contains the XML field name that must be used when creating the XML file.
- Column #2 – each row from this column contains a text description of the element.
- Column #3 – each row from this column describes the size and type of data.
- Column #4 – each row from this column contains a unique number that identifies the element.
- Column #5 – each row from this column contains the element's Field Use Code. Please note that these Field Use Codes are color-coded and have the following meaning:

  S System Elements – Each element marked with an **S** in this table must be entered into the XML file. Submission of this type of element is required (i.e., mandatory).

  F Financial Elements – Each element marked with an **F** should be entered in the XML file. Although not mandatory, entering this information now will save time later.

  N Narrative Elements - Each element marked with an **N** should be entered in the XML file. Although not mandatory, entering this information now will save time later.

M Miscellaneous Elements - Each element marked with an **M** should be entered in the XML file. Although not mandatory, entering this information now will save time later.

- Column #6 – each row from this column contains additional information (e.g., examples of data to be placed in the element).

XML File Layout Table

XML File Layout Table					
XML Data Elements	**Description**	**Data Type and Size**	**Field #**	**Field Use**	**Additional Comments**
<?xml version="1.0" encoding="ISO-8859-1"?>	Required XML Header element.	Constant	1	S	Enter this case-sensitive text to specify the recommended ISO-8859-1 standard for encoding XML data. Without this line, the default encoding to be utilized will be UTF-8 or UTF-16, which does not permit the use of special characters. Other encoding standards may be specified but it is recommended that you contact the L-P-SDRD Systems Administrator before using a different encoding standard. If using Microsoft Word to create this line of text, please do not enter Microsoft's "smart quotes" but instead use "straight quotes" around the required text positions.
<{SiteCode}_ {FiscalYear}>	File Begin Element	Constant	2	S	Enter the text for the Site Code, followed by an underscore character, then followed by the text for the Fiscal Year. Spaces are not permitted. (e.g., <LANL_2002>)
<Project>	Project Data Start Element	Constant	3	S	Enter the starting header element to identify the Project Section of this file (e.g., <Project>).
<ProjectID>	Project ID	Varchar(21)	4	S	Enter the Project Identification Code for this project. Use of blanks and/or null characters within the text of the ProjectID is not permitted. (e.g., <ProjectID>L/LBNL-01</ProjectID>)
<LastFY_ProjectID>	Last Fiscal Year Project ID	Varchar(21)	4	S	Enter this project's last fiscal year project ID. (e.g <LastFY_ProjectID>L/LBNL1</LastFY_ProjectID>) If the LastFY_ProjectID exists in last fiscal year's project record, a link is saved in the system. The system can use this link to calculate cumulative cost. If the record identified by LastFY_ProjectID does not exist in our database, the batch feed record will be rejected. An error message will be generated too. For new project, enter N/A for LastFY_projectID.
<ProjectName>	Project Name	Varchar(200)	5	S	Enter text for the Project Name. No NULL or blanks. (e.g., <ProjectName>Quarks</ProjectName>)
<TypeResearch>	Type of Research	Varchar(1)	6	S	Enter the Research Type. See the Research Type Table in L-P-SDRD for the complete list of codes. (e.g., <TypeResearch>B</TypeResearch>)

XML File Layout Table					
XML Data Elements	**Description**	**Data Type and Size**	**Field #**	**Field Use**	**Additional Comments**
<ProjectStartDate>	Project Start Date	Date	7	S	Enter starting date of the project. Must be a valid date in the format mm/dd/yyyy (e.g., <ProjectStartDate>12/23/2002</ProjectStartDate>)
<TotalCost>	Total Cost	Money	11	F	Enter Total Cost. Whole dollar only. (e.g., <TotalCost>2500</TotalCost>)
<ProjectDesc>	Project Description	Varchar(800)	12	N	Enter text for the Description of Project. Text length not to exceed 800 chars. (e.g., <ProjectDesc> This is the text for the narrative description.</ProjectDesc>)
<InvFirstName>	Investigator First Name	Varchar(28)	18	M	Enter text for the investigator's first name. (e.g., <InvFirstName>Thomas</InvFirstName>)
<InvLastName>	Investigator Last Name	Varchar(30)	17	M	Enter text for the investigator's last name. (e.g., <InvLastName>Henry</InvLastName>)
<POCFirstName>	POC First Name	Varchar(28)	20	M	Enter text for the POC's first name. (e.g., <POCFirstName>Linda</POCFirstName>)
<POCLastName>	POC Last Name	Varchar(30)	19	M	Enter text for the POC's last name. (e.g., <POCLastName>Thomas</POCLastName>)
<POCPhone>	POC Phone	Varchar(15)	21	M	Enter the POC's phone number. Use the format: nnn-nnn-nnnn (e.g., <POCPhone>301-123-4567</POCPhone>)
<ExpectedCompDate>	Expected Complete Date	Date	22	M	Enter a date for the project's expected completion date in mm/dd/yyyy format. Value must be a valid date or NULL. (e.g., <ExpectedCompDate>01/15/2003 </ExpectedCompDate>)
</Project>	Ending Element for one Project	Constant	23	S	Enter the ending header element for this project (e.g., </Project>).
<{/SiteCode}_ {FiscalYear}>	Ending element for the Site Code-Fiscal Year.	Constant	24	S	Enter the text for the Site Code, followed by an underscore character, then followed by the text for the Fiscal Year. Spaces are not permitted. (e.g., </LANL_2002>)

5.2 Formatting Example

The example below illustrates the use of the XML file syntax and contains two sample projects in this upload file (e.g., Project ID 266 and Project ID 267). Project ID 266 contains data and syntax for all of the required and optional fields. Project ID 267 contains data and syntax for just the required fields. Please note that, if viewing this sample file with a monitor or a color printer, that text for required XML syntax uses the color **black** and text for site-specific data such as Project ID, Project Name, Type of Research, etc. uses the color **blue**.

<?xml version="1.0" encoding="ISO-8859-1"?>
<LANL_2002>
<Project>
<ProjectID>266</ProjectID>

<LastFY_ProjectID>13</LastFY_ProjectID>
<ProjectName>Next Generation Energy System Analysis Tools</ProjectName>
<TypeResearch>B</TypeResearch>
<ProjectStartDate>10/01/1999</ProjectStartDate>
<TotalCost>317100</TotalCost>
<ProjectDesc>Develop of next generation of energy system analysis tools. </ProjectDesc>
<InvFirstName>Lauren</InvFirstName>
<InvLastName>Johnson</InvLastName>
<POCFirstName>Paul</POCFirstName>
<POCLastName>Kaufmann</POCLastName>
<POCPhone>630-252-3606</POCPhone>
<ExpectedCompDate>12/22/2001</ExpectedCompDate>
</Project>
<Project>
<ProjectID>267</ProjectID>
<ProjectName>Single/Multiple Processes</ProjectName>
<TypeResearch>B</TypeResearch>
<ProjectStartDate>10/01/2000</ProjectStartDate>
</Project>
</LANL_2002>

6.0 Processing Scenarios

This section describes several processing situations that contain valid and invalid types of input data. The purpose of this exercise is to help the reader to understand how the application will analyze, edit, and accept or reject records found the XML project file.

6.1 Example 1 – XML Record Rejected – System Required Elements

In this scenario, one of the project records sent by a site in the XML batch file contains inaccurate information for two of the system required elements. The "Project ID" element contains a "null" value and the "Type of Research" element contains the value "unknown".

Processing Rules
The application rejects this XML record and does not write it to the L-P-SDRD database because two of the system required data elements contained invalid data.

Errors
Error - Project ID is empty.
Error – Research Type not found.

6.2 Example 2 – XML Record Rejected – Invalid Fiscal Year

In this scenario, one of the project records sent by a site in the XML batch file contains an invalid value (e.g., 1965) for the record's <Site Code Fiscal Year> data element.

Processing Rules
The application rejects this XML record because the data element contains an invalid value for the Fiscal Year and does not write this record to the L-P-SDRD database.

Errors
Error - Invalid Fiscal Year.

7.0 Testing the Upload File

A special test area has been established to help you test all aspects of the upload process, which can include sending the upload file, confirming the success of the transmission, reviewing error messages and correcting errors. The steps listed below describe how to use this test area.

1. At this point, it is assumed that you have created an XML upload file and have saved it to a folder located on your workstation or local area network.

2. When ready to initiate your test plan,
   a) If you are a new user, you must first apply for an account as a "Tester". See step 3 for details.

b) If you have a test account in last year, you'll have to update your user agreement in the production system first by logon to the production system. L-P-SDRD System Administrator will activate your test account afterwards and will send a confirmation message.

3. You apply for this account by selecting the Request Account hyperlink (see Figure 7.1) that is located on the login page of the Production website (https://ldrdrpt.doe.gov/)

   - When the Request Account form appears, please answer all questions on the form. When selecting a value from the Requested Access dropdown box (i.e., screen field #8), make sure that you select the user role of Tester Group.

   - **Please make sure that you enter your telephone number and e-mail address. Otherwise, we may not be able to reach you to verify and approve your request.**

   - **Also, make a note of the User ID and password that you have chosen.**

4. Your request for this account will be reviewed. You may receive a telephone call or e-mail message from the System Administrator, to verify the information on your request.

5. Once the request has been approved, the System Administrator will create an account for you and will send a confirmation message.

6. When ready to send the upload file to the Test Area, connect to the L-P-SDRD Production website. When the login page appears, enter your new User ID, Password and then select the "Testing" option button (located beneath the password text box). See Figure 7.1 for an example of values being placed into the User ID, Password and Tester option button.

   - After validating your User ID, Password and selection for "Testing", the Production website will automatically re-direct you to the Test Area on the Test website:

   - Once connected to the Test Area on the Test website, select the Upload Data hyperlink to activate the upload function.

   - Use the **Browse** button to locate the upload file, and then press the **Submit** button to send the file from your site to the L-P-SDRD Test Area website.

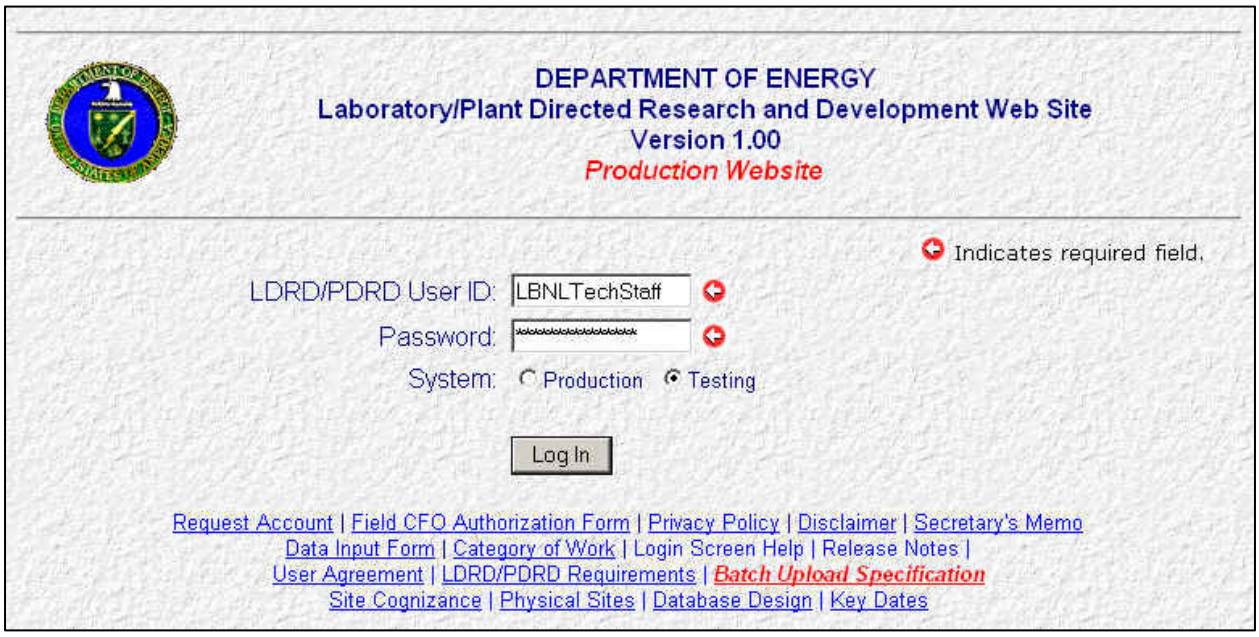
   - When the upload file has been processed by the Test Area website, a screen will display the Transmission Summary Page. Please refer to Section 4.0 - Generating and Sending the Project File of this document for additional information regarding error messages and processing results.

   - Please note that the Test Area website contains a separate database and web page content (i.e., separate from the Production website). Therefore, you should feel free to repeat the upload process and/or make corrections to project data (i.e., using data entry screens), to suit the needs of your test plan.

7. When all testing has been completed, please exit from the Test Area website.

8. Contact the L-P-SDRD website's hotline telephone number 301-903-0605 if you have problems or questions.

Figure 7.1 - Login Page – L-P-SDRD Website



Appendix A – Processing Rules for Database Project Table

Information in this section is presented as a convenience to the reader and knowledge of this information is not required to generate or send the XML file to the L-P-SDRD website.

The table below summarizes the L-P-SDRD application's processing rules for updating the Project Table in the L-P-SDRD database. It describes how the application will update data in each field of the L-P-SDRD Project Table from data in the corresponding field of the XML record. The table is organized in the following manner:

- Column #1 of the table contains the name of each field in the Project Table.
- Column #2 indicates if the value of the input field is required for the Finalization process.
- Column #3 provides a description of the processing activity.

Processing Rules for Updating the L-P-SDRD Projects Table

L-P-SDRD Project Table Field Name	Required for Finalization	Description of Processing Rules
Project_sysID	Y	▪ This is the Primary key for the Project Table. ▪ Value is the concatenation of the Site_id and the ProjectID.
ProjectID	Y	▪ Updated with the XML file's <ProjectID> element ▪ This is a key field in the Project Table. ▪ No NULL or blank.
LastFY_ProjectID	N	▪ Updated with the XML file's <LastFY_ProjectID> element. ▪ If the LastFY_ProjectID exists in last fiscal year's project record, a link is saved in the system. The system can use this link to calculate cumulative cost. ▪ If the record identified by LastFY_ProjectID does not exist in our database, the batch feed record will be rejected. An error message will be generated too. ▪ For new project, enter N/A for LastFY_projectID.
Project_Name	Y	▪ Updated with the XML file's <ProjectName> element ▪ No NULL or blank.
Site_ id	Y	Updated with the user's authorized Site_ID.
FiscalYear	Y	Updated with the Fiscal Year assigned to the system at the time of the add.
ResearchType_id	Y	▪ Updated from the [Research] table ▪ ResearchType_id where the ResearchType_Code equals the XML file's <TypeResearch> element.
dt_Start	Y	▪ Updated with the XML file's <ProjectStartDate> element. ▪ Must be a valid date.
dt_expComplete	N	▪ This field is updated with the XML file's <ExpectedCompDate> element. ▪ Value must be a valid date or NULL.
dt_Finalize	Y	Is updated by system when user sets Finalize field to "Yes".
User_sysId_Finalize	N	Updated with value of the finalizer's system UserID.
Total	Y	▪ Updated with the XML file's <TotalCost> element. ▪ Whole dollar only. i.e. 20000
Investigator_Name	N	Updated with the XML file's <InvLastName> and <InvFirstName> element.
POC_Name	Y (Last Name)	Updated with the XML file's <POCLastName> and <POCFirstName> element.

Processing Rules for Updating the L-P-SDRD Projects Table		
L-P-SDRD Project Table Field Name	**Required for Finalization**	**Description of Processing Rules**
POC_Phone	Y	▪ Updated with the XML file's <POCPhone> element ▪ Format: nnn-nnn-nnnn. i.e. 301-123-4567
Project_Desc	N	Updated with the XML file's <ProjectDesc> element
Proprietary	N	Constant "Y" for "Yes".
dt_Added	Y	This field is updated with the value of system date when the project data is first loaded from the XML file.
dt_Updated	Y	Updated with the system date when the project data is updated from XML file
Originator_sysID	N	Updated with value of the user's system UserID.

Appendix B – Site Codes

The table below contains a list of site codes, site descriptions and types of sites. Please refer to the L-P-SDRD website (e.g., hyperlink "Reference Tables – Site") for the most current source of information.

Site Code	Site Description	Site Type
AMES	Ames Laboratory	Lab
ANL	Argonne National Lab	Lab
BNL	Brookhaven National Lab	Lab
KCP	Kansas City Plant	Plant
LANL	Los Alamos National Lab	Lab
LBNL	L. Berkeley National Lab	Lab
LLNL	L. Livermore National Lab	Lab
ORNL	Oak Ridge National Lab	Lab
PNNL	Pacific Northwest National Lab	Lab
PTX	Pantex Plant	Plant
SNL	Sandia National Lab	Lab
SRP	Savannah River Plant	Plant
Y_12	Y-12 Plant	Plant
INEEL	Idaho National Engineering and Environmental Lab	Lab
NTS	Nevada Test Site	Site